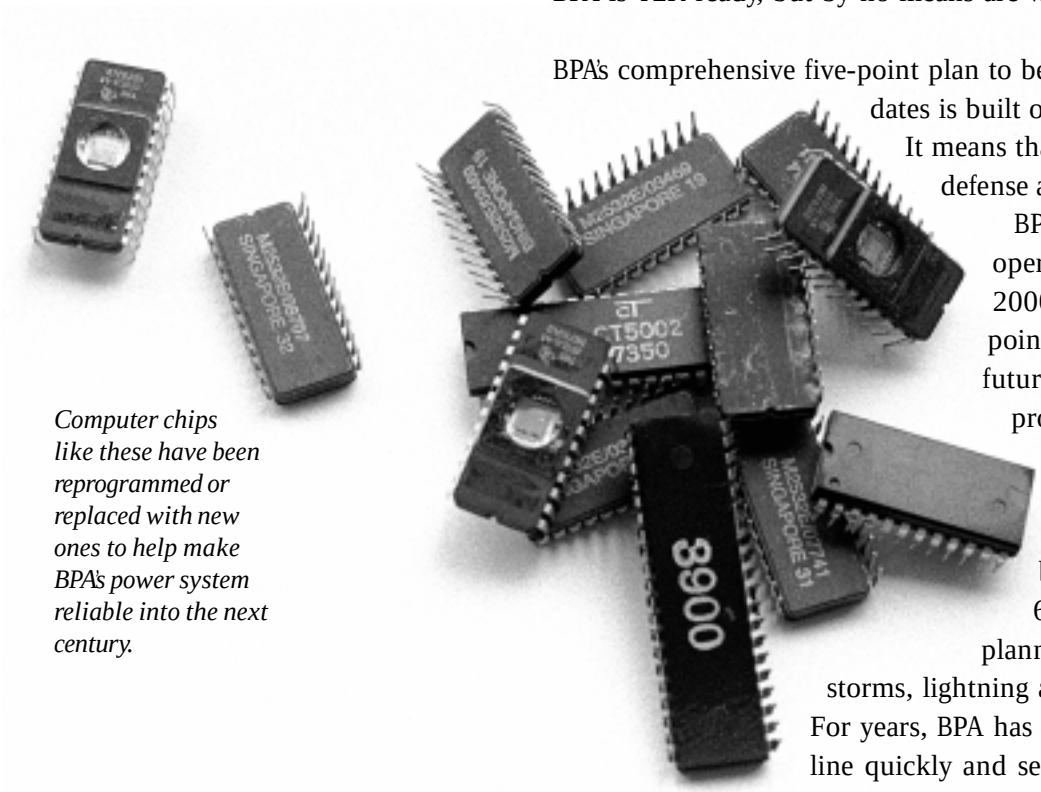
BPA AND Y2K

JULY 1999

A quarterly status report for BPA customers, constituents, employees and the public on BPA's Year 2000 readiness

Contingency Planning: The Next Step in Preparing for Y2K

BPA is Y2K ready, but by no means are we done.



Computer chips like these have been reprogrammed or replaced with new ones to help make BPA's power system reliable into the next century.

BPA's comprehensive five-point plan to be ready for the year 2000 and related dates is built on the concept of "defense in depth." It means that we have more than one line of defense against the unexpected.

BPA expects that the power system will operate safely and reliably on Jan. 1, 2000. Our Y2K tests and preparations point to that. But no one can foresee the future. Contingency planning is the process of imagining and preparing for a range of future events whether we expect them to happen or not.

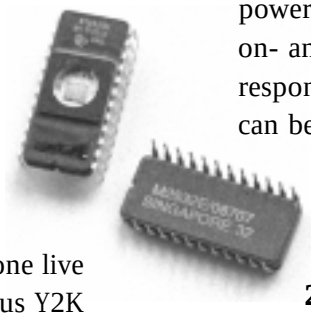
BPA, like any electric utility that's been in the business for more than 60 years, has lots of experience planning for unexpected events. Winter storms, lightning and cold snaps happen every year. For years, BPA has been bringing the system back on line quickly and seamlessly following power failures. For the past 20 years, BPA has operated its power system to an "n minus 1" standard. In the business, this means that the system is designed to be able to lose one high voltage transmission line and still remain in operation. Under this operating standard, in the event that something does fail, we are prepared for it. Ideally, our customers are unaffected.

BONNEVILLE POWER ADMINISTRATION

BPA's Five-Point Plan for Y2K Readiness

In our years of experience running a reliable power system, the best way to prepare is to prepare thoroughly. BPA's approach to Y2K readiness is methodical and redundant: plan, find, fix, test, re-test and plan some more. Here is the five-point plan:

1) Use a methodical process to find/fix Y2K problems
2) Increase scrutiny on critical systems for transmission reliability
3) Coordinate with entities that have significant effect on transmission
4) Develop contingency plans for operating the transmission system
5) Develop comprehensive response plans



With Y2K contingency planning, we have some natural advantages. We know the dates before they're coming. Staff and equipment will be in place and ready. We've already done live testing and simulated various Y2K events.

Planning for Backup, Cushion, Redundancy and More

The foundation of BPA's Y2K contingency planning is to operate our system so we have more "cushion" over the New Year's weekend going into the year 2000. This means we operate conservatively, have back-up systems, more power and transmission in reserve, and more staff on board. Here are some of the basic elements of BPA's Y2K contingency plan:

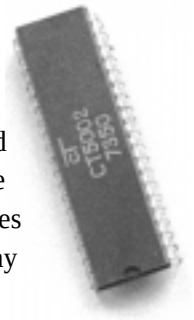
1. **Back-up Generation.** BPA will have more generation on-line than normal for the day and season. The contingency plan calls for all generators at the 29 federal dams (operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation) and one nuclear plant (operated by Energy Northwest) that make up the BPA system to be ready to come on line if needed. In addition, BPA will carry at least twice the required amount of power in reserve, on line and available immediately if needed.

   BPA's hydro-based system actually provides more cushion than a system that uses mostly thermal plants. Hydropower is more flexible. Hydropower plants can be brought on- and off-line quickly in response to changes. Because it can be available more quickly, hydropower is also a useful back-up if any other generation is lost.

2. **Reduced Imports and Exports.** BPA will reduce the scheduled amount of power transfers between its system and adjacent systems. We plan to limit our buying and selling of power on critical Y2K dates to help limit the traffic on the transmission grid.

3. **Redundant Systems.** BPA is planning to have redundant communication systems. Redundancy is a good thing when you want to provide some cushion.

   - BPA has purchased a satellite telephone that will back up its several other communication systems and operate independently of the public telephone system. Voice and data communications are critical to operating the power system: dispatchers, generators, and schedulers communicate across thousands of miles every minute of every day in order to keep power flowing over the grid. BPA also uses analog microwave telecommunication, which doesn't depend on computer controls for its operation.



   - The Corps and Reclamation will be prepared to operate the dams on manual controls should the computer-run generation systems be lost.

4. **Increased Staffing.** BPA will have more staff than normal at work and on call at the control centers and substations during the Dec. 31, 1999, to January 1, 2000, Y2K rollover for monitoring and giving regular reports to customers and the press, as well as troubleshooting if needed.

5. **Frequent Communication.** Power system operators on the West Coast and throughout North America will be monitoring developments on New Years Eve and keeping each other

Contingency Planning in the Western Grid

For the past year, BPA has been working with the utilities and other power systems in the Western Systems Coordinating Council (WSCC) to prepare contingency plans for operation of the entire western transmission grid. Power systems in the 14 western states and parts of Canada and Mexico are connected across state and international boundaries.

WSCC is in an excellent position to coordinate contingency planning among its widespread and diverse membership. The 107 WSCC member systems have worked together for years to keep power safe and reliable on the western grid.

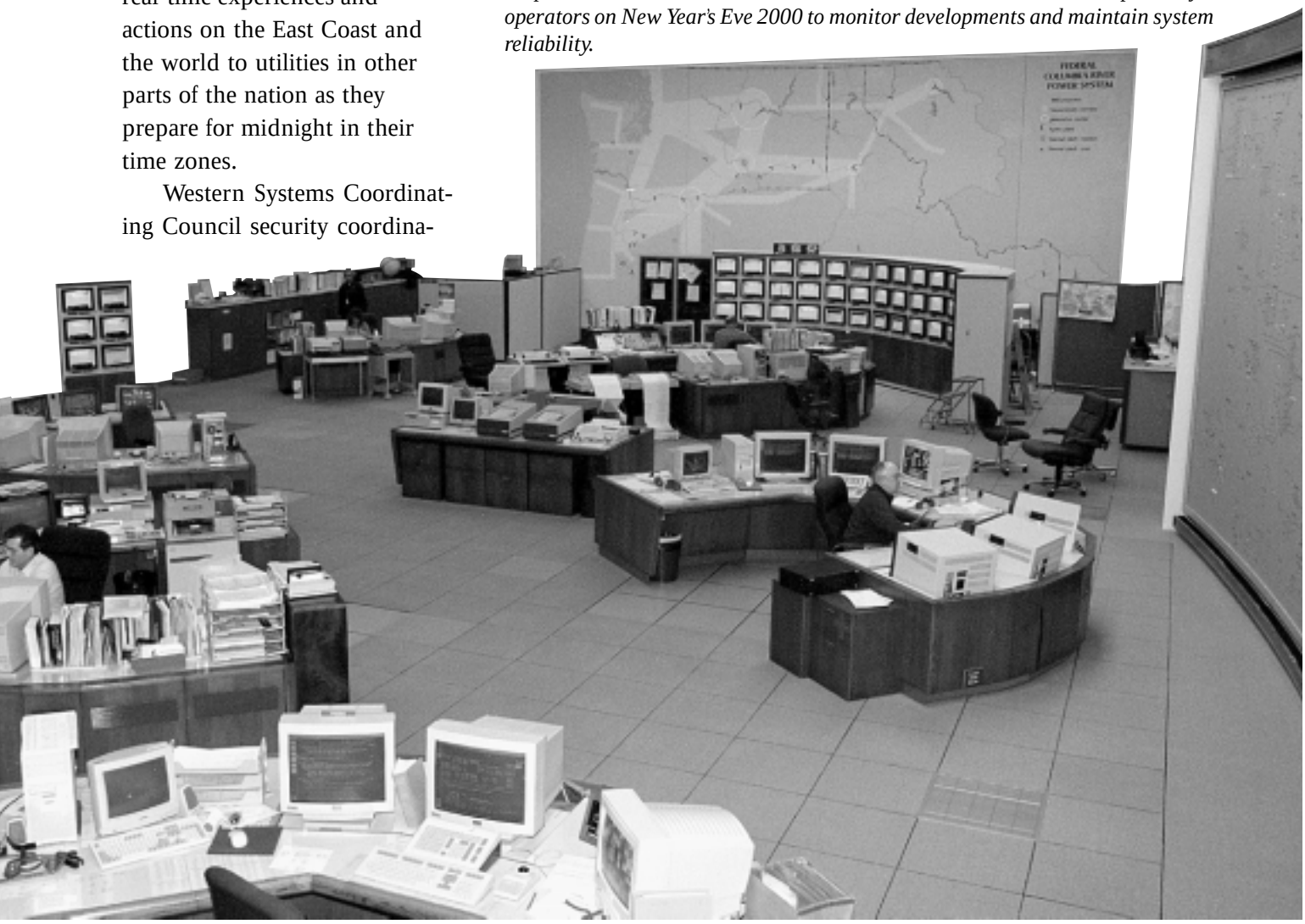
WSCC's Y2K task force is planning operations for critical Y2K dates, conducting Y2K training and drills, and focusing on communication among the security coordinators.

apprised. The North American Electric Reliability Council (NERC) will have a system in place to quickly transmit the real-time experiences and actions on the East Coast and the world to utilities in other parts of the nation as they prepare for midnight in their time zones.

Western Systems Coordinating Council security coordinators will contact each of the control centers on a regular basis and share information with the others.

6. **Drills and Tests with Utilities Across the Country.** On April 9 of this year, NERC coordinated a Y2K drill focusing on communications. WSCC members reported the drill was an overwhelming success, meeting objectives while revealing minor adjustments that can be made in systems and training. A second NERC drill, planned for September 9, will run various contingency scenarios. BPA is a key player in these tests.

Dispatchers in BPA's control centers will be in close contact with other power system operators on New Year's Eve 2000 to monitor developments and maintain system reliability.

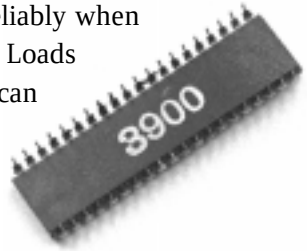


"One for All and All for One"

All 14 Western states and Canada and Mexico in the western transmission grid plan to operate their transmission grids interconnected going into New Years Eve 2000. We believe this is the most reliable strategy to handle unexpected occurrences.

Major transmission lines in BPA's four-state service area interconnect with other utilities' tranmission in other Western states and Canada (shown in darker gray).

The WSCC grid is designed to operate more reliably when interconnected. Loads and generation can be balanced from one system to another. If load or generation is lost, the generators in the WSCC can help each other stabilize their systems.



WSCC security coordinators responsible for the reliable operation of the power system within large regional areas will direct dispatch of transmission within the WSCC grid according to pre-established Y2K limits in each area as necessary to provide for system reliability.

All Systems in Place to be Y2K Ready

When New Years Eve 2000 rolls around, BPA will have already encountered and dealt with at least three critical Y2K dates (Dec. 31, 1998; April 9, 1999; and Sept. 9, 1999.) We will have participated in two North American power system drills. We will have found, fixed, tested and managed equipment and systems to be Y2K ready. With this foundation, and contingency plans ready as a back-up, BPA fully expects to enter the 21st century operating the reliable and safe power system that we have today.

Progress report: BPA's Y2K readiness

(This status report will be updated and printed in every issue of BPA and Y2K.)

Milestones	Target	Status
Conduct inventory	August 1998	Completed July 1998
Develop Y2K testing guidelines	August 1998	Completed August 1998
Assess risk	September 1998	Completed October 1998
Develop test plans	October 1998	Completed October 1998
Test components	January 1999	Completed January 1999
Test systems and implement Y2K solutions (including re-testing)	March 1999	Completed March 1999
Develop system operation contingency plan	June 1999	Second draft reviewed by WSCC
Complete business continuity plan	August 1999	On Schedule
Conduct NERC drill	September 1999	Planned

Information in *BPA and Y2K* is provided in line with the Year 2000 Information and Readiness Disclosure Act, which "…encourages the disclosure and exchange of information about computer processing problems, solutions, test practices and test results, and related matters in connection with the transition to the year 2000."

BPA and Y2K will be published quarterly. For additional copies or to add a name to the mailing list, please call BPA's Public Information Center, at 1-800-622-4519. Also, visit our Web site at *www.bpa.gov.*; there is a Y2K button on our home page.

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